

FIG.1 A

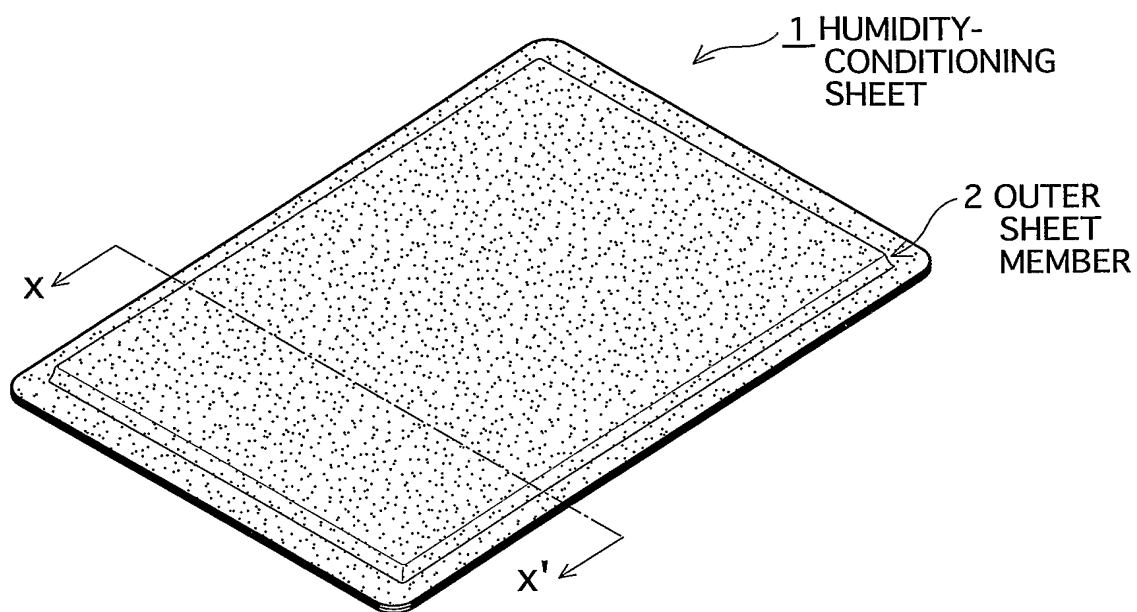
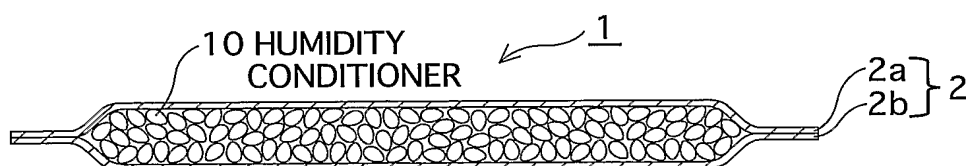


FIG.1 B



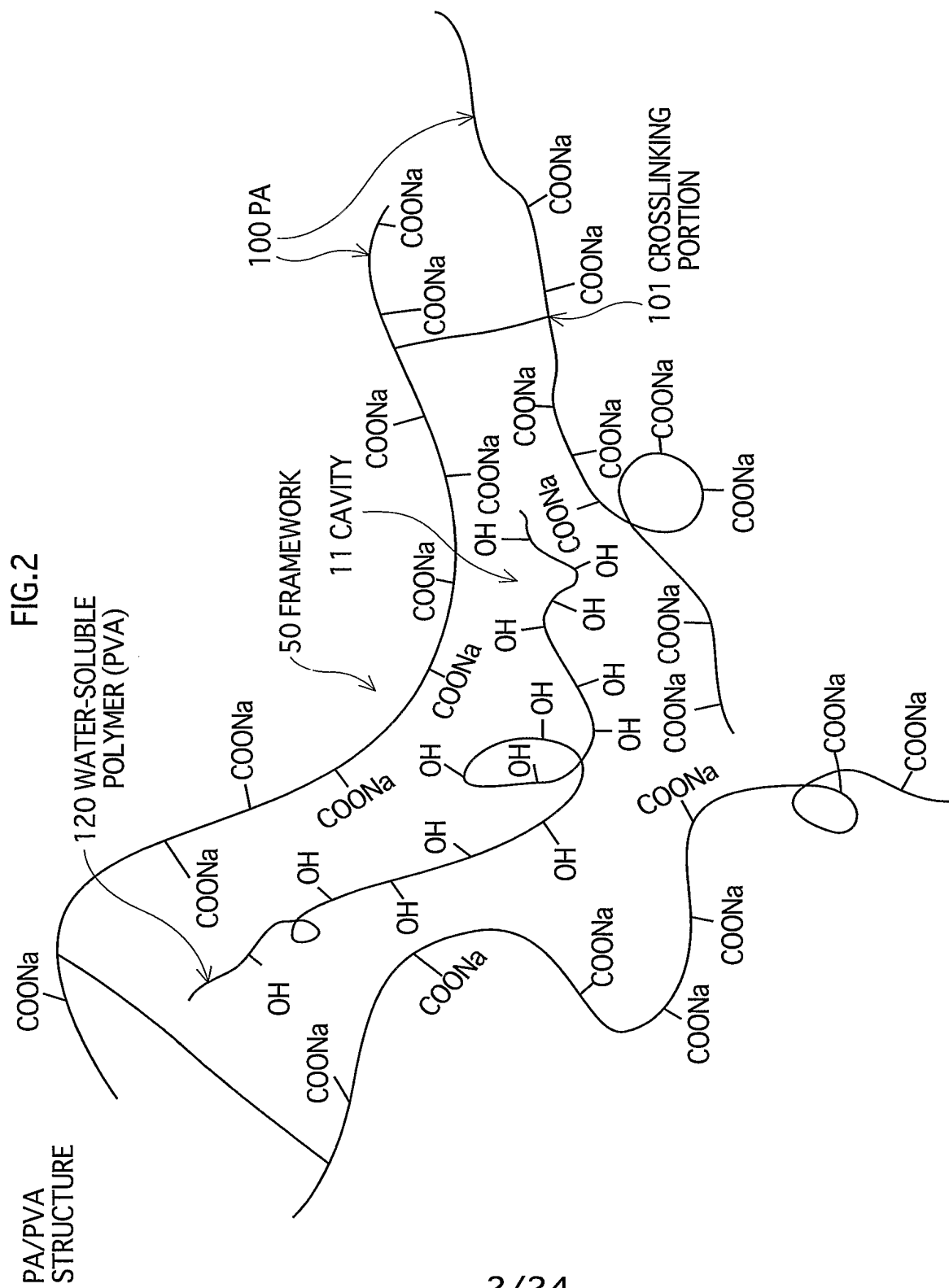


FIG.3

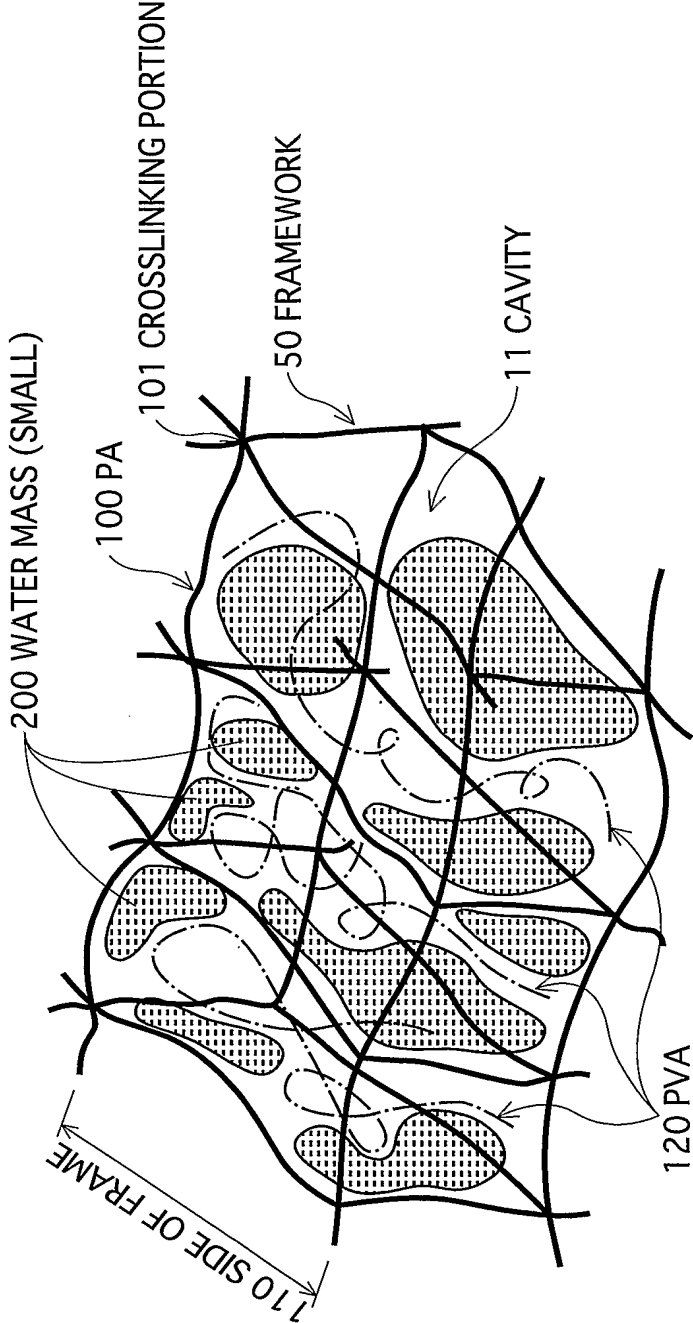


FIG.4

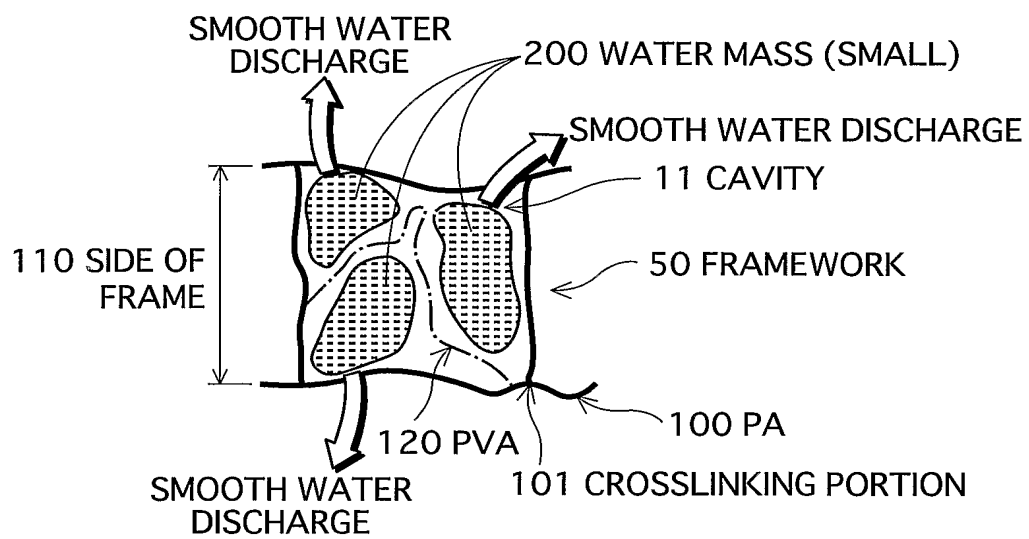


FIG. 5

PA/P-NIPAM STRUCTURE

COONa 130 WATER-SOLUBLE POLYMER
(P-NIPAM)

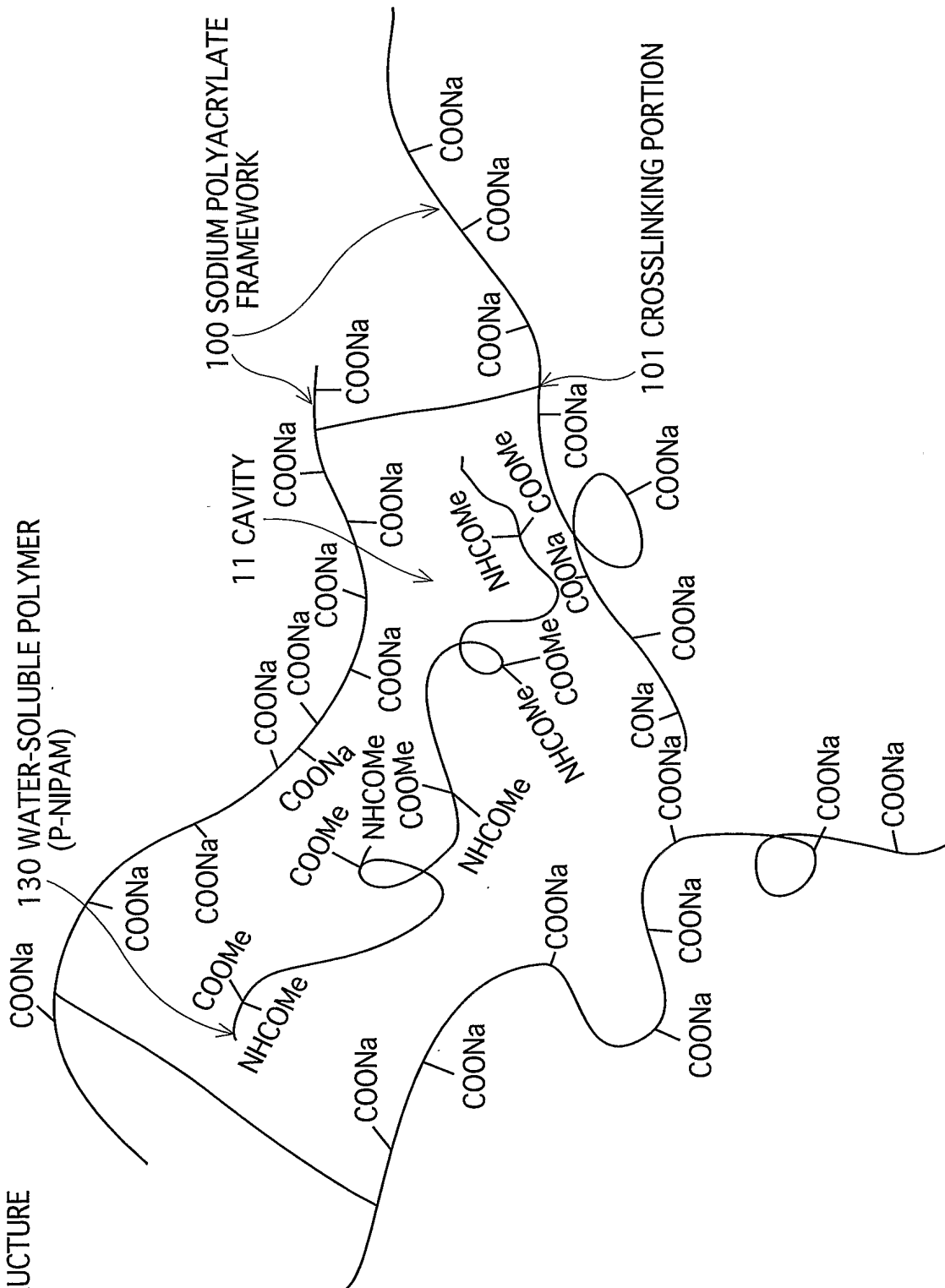


FIG.6

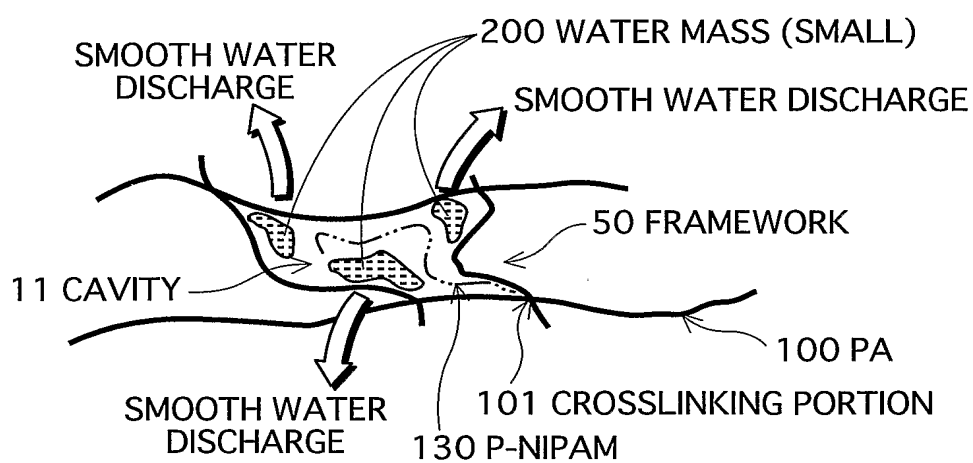


FIG. 7

Changes in Weight (g) after Filtration

Sample		Elapsed Time (hour)											
		Tare Weight	0	13	25	62	74	86	95	110	134	159	183
A		55.5	97.96	92.36	87.43	79.19	76.19	71.89	68.78	66.04	60.86	56.25	55.61
B		56.01	94.78	90.2	84.82	75.55	72.43	69.14	65.9	63.59	59.98	56.8	56.14
C		55.82	94.82	89.39	84.27	74.58	71.72	67.92	64.84	62.38	59.18	55.97	55.95
D		56.0	96.21	91.57	86.14	75.69	72.7	69.25	65.26	62.76	59.29	56.14	56.12
E		56.82	94.06	88.75	83.19	73.08	70.08	66.06	62.96	60.85	58.15	56.95	56.95

FIG.8

Amount of Weight Change (g)

Sample	Elapsed Time (hour)										
	0	13	25	62	74	86	95	110	134	159	183
A	42.46	36.86	31.93	23.69	20.69	16.39	13.28	10.54	5.36	0.75	0.11
B	38.77	34.19	28.81	19.54	16.42	13.13	9.89	7.58	3.97	0.79	0.13
C	39.0	33.57	28.45	18.76	15.9	12.1	9.02	6.56	3.36	0.15	0.13
D	40.21	35.57	30.14	19.69	16.7	13.25	9.26	6.76	3.29	0.14	0.12
E	37.24	31.93	26.37	16.26	13.26	9.24	6.14	4.03	1.33	0.13	0.13

FIG.9

Changes in Weight (g) after Filtration

Sample	Elapsed Time (hour)					
	Tare Weight	0	9	46	60	118
X	55.5	126.89	120.71	107.16	102.59	93.35
Y	55.83	120.89	116.9	104.19	99.32	81.24

FIG.10

Amount of Weight Change (g)		Elapsed Time (hour)				
		0	9	46	60	118
X		71.39	65.21	51.66	47.09	31.18
Y		65.06	61.07	48.36	43.49	25.41

FIG.11

Changes in Weight (g) after Filtration

Sample	Elapsed Time (hour)		
	Tare Weight	0	35
x	56.82	59.73	57.18
y	56	60.37	56.74

FIG.12

Amount of Weight Change (g)

Sample	Elapsed Time (hour)	
	0	35
x	2.91	0.36
y	4.37	0.74

FIG.13

Amount of Water Absorption after Drying Period of 35 Hours

Sample	Amount of Water and Elapsed Time (hour)			
	Water added	Absorption condition	1-hour later	Additional water
x	10 mL	70% absorbed	95% absorbed	10 mL
y	10 mL	100% absorbed	-	10 mL

FIG.14

Amount of Water Absorption after Drying Period of 1 Week

Sample	Amount of Water and Elapsed Time (hour)		
	Water added	20-min later	1-hour later
x	10 mL	20-30% absorbed	90% absorbed
y	10 mL	80% absorbed	95% absorbed

FIG.15

Amount of Water Absorption after Drying Period of 1 Month

Sample	Amount of Water and Elapsed Time (hour)		
	Water added	20-min later	30-min later
x	5 mL	50% absorbed	nearly 100% absorbed
y	5 mL	80% absorbed	95% absorbed

FIG.16

Changes in Weight (g) after Filtration

Sample	Elapsed Time (hour)							
	Tare Weight	0	18	19	20	21	69	90
a	52.92		56.12	56.07	55.97	55.87		53.65
b	54.32	57.06					55.1	
c	52.76		54.56	54.5	54.43	54.37		53.55
c'	54.24	56.25					54.72	
d	53.1		54.05	53.99	53.93	53.87		53.56
e	53.56		57.8	57.7	57.47	57.24		54.93

FIG.17

Amount of Weight Change (g)

Sample	Elapsed Time (hour)							
	0	18	19	20	21	69	90	
a		3.2	3.15	3.05	2.95		0.73	
b	2.74					0.78		
c		1.8	1.74	1.67	1.61		0.79	
c'	2.01					0.48		
d		0.95	0.89	0.83	0.77		0.46	
e		4.24	4.14	3.91	3.68		1.37	

FIG.18

Amount of Water Absorption after Dried

Sample	Elapsed Time (hour)									
	20-min after 5 mL water added	Immediately after water absorption	1	2	3	4	5	6	24	42
a	70% absorbed	57.5	57.32	57.21	57.07	56.94	56.86	56.78	55.04	53.83
b	70% absorbed	58.41	58.26	58.18	58.08	57.93	57.83	57.74	56.21	55.05
c	50% absorbed	56.65	56.47	56.4	56.29	56.15	56.07	55.98	54.34	53.48
c'	70% absorbed	63.73	63.52	63.38	63.18	62.95	62.77	62.57	59.79	56.75
d	60% absorbed	57.43	57.24	57.12	57.01	56.88	56.79	56.68	55.05	53.64
e	70% absorbed	59.04	58.87	58.65	58.46	58.28	58.14	58.03	55.91	54.73

FIG.19

Amount of Weight Change (g)

Sample	Elapsed Time (hour)			
	0	6	24	42
a	4.58	3.86	2.12	0.91
b	4.09	3.42	1.89	0.73
c	3.89	3.22	1.58	0.72
c'	9.49	8.33	5.55	2.51
d	4.33	3.58	1.95	0.54
e	5.48	4.47	2.35	1.17

FIG.20

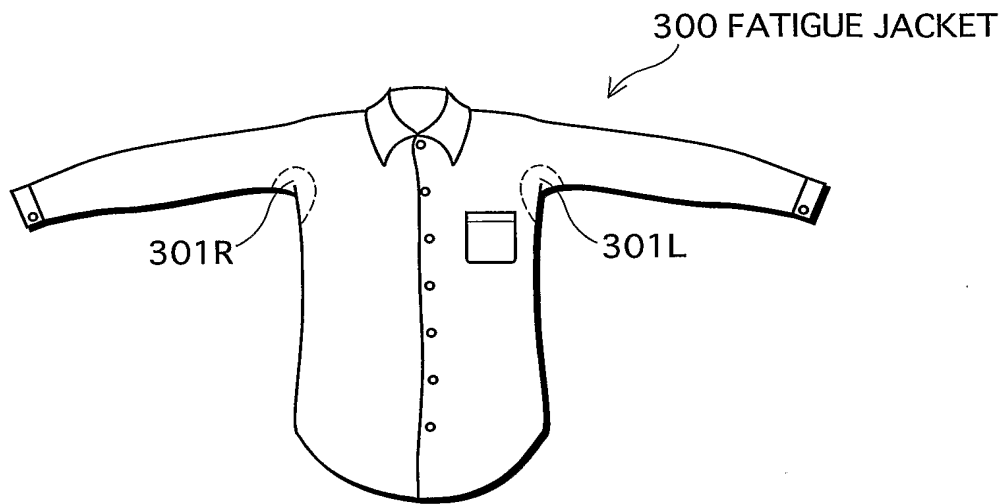


FIG.21

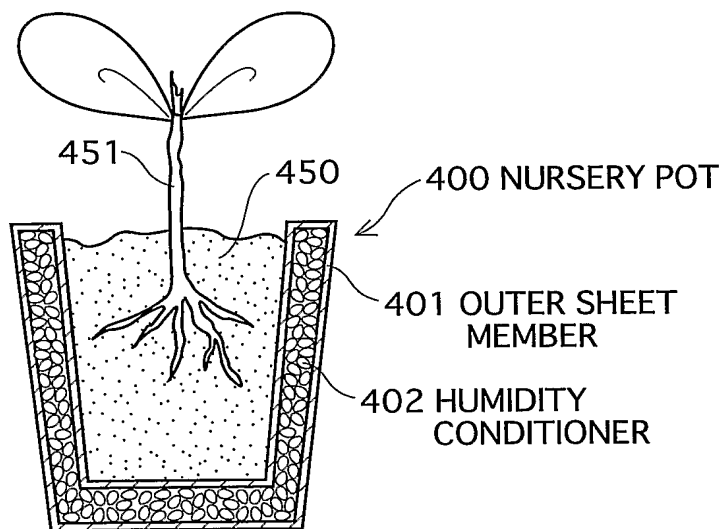


FIG.22

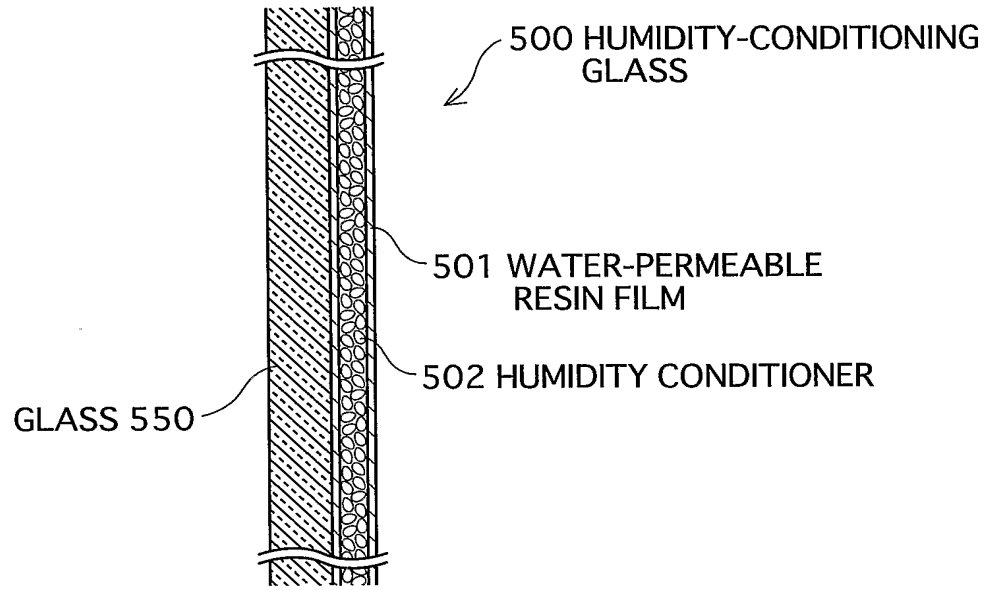


FIG.23

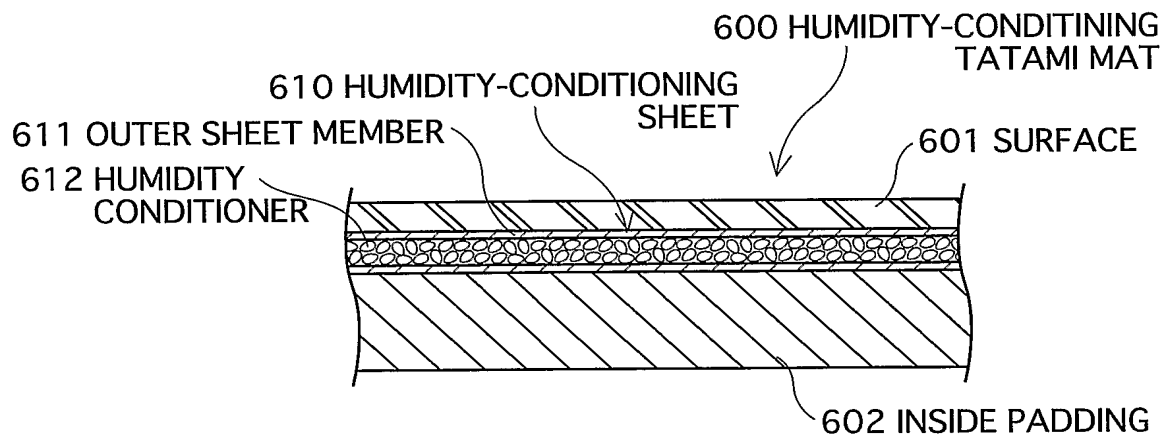


FIG.24A

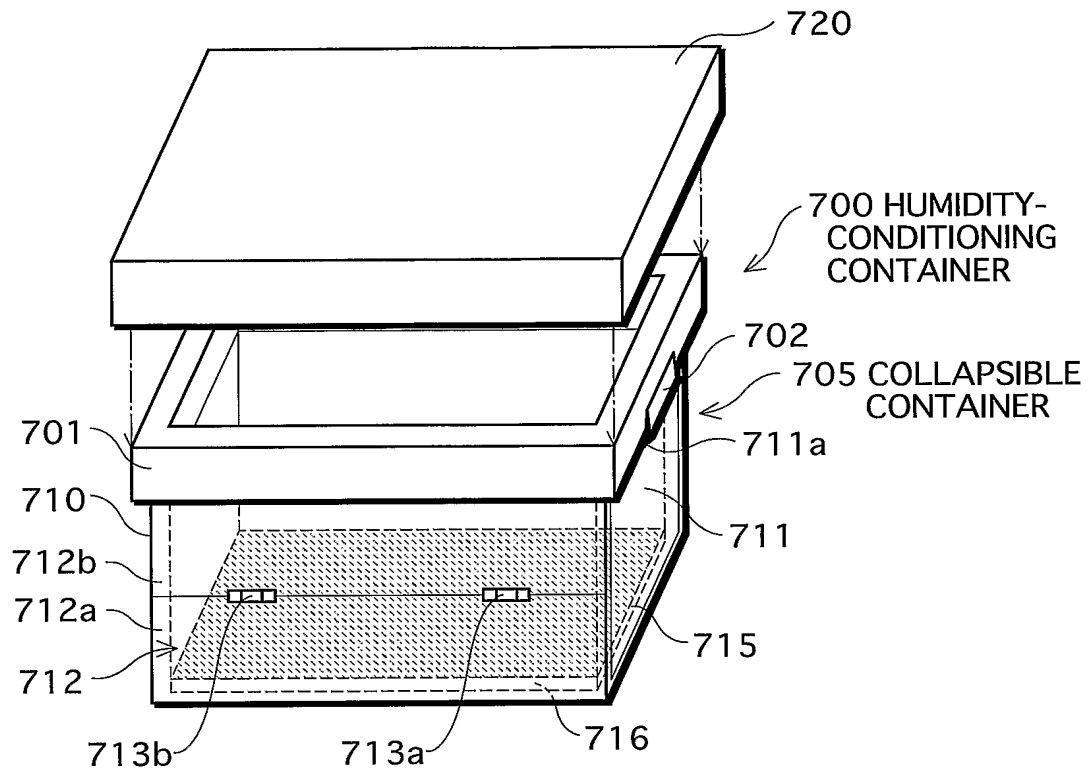


FIG.24B

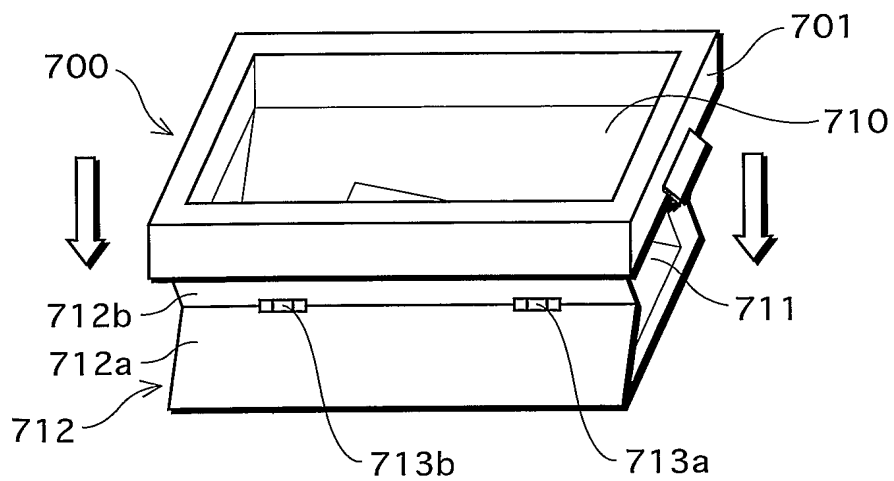


FIG.25A

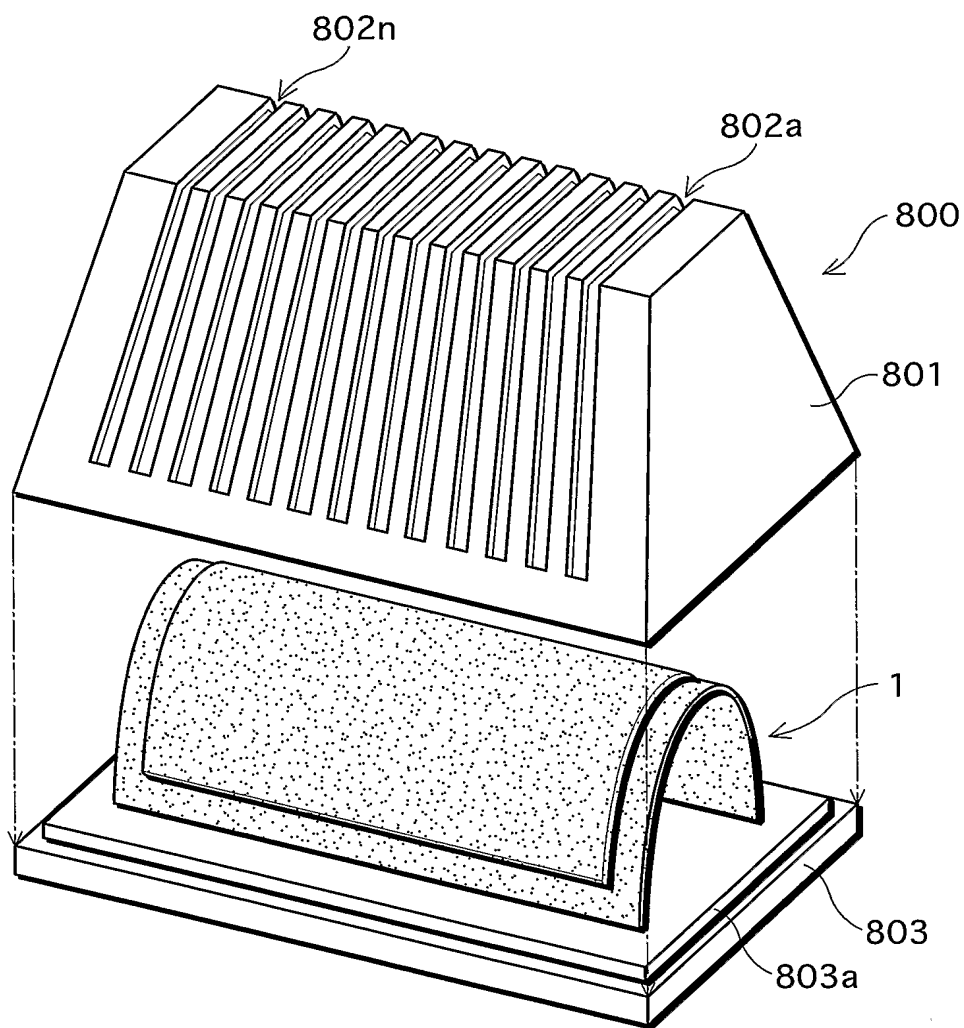


FIG.25B

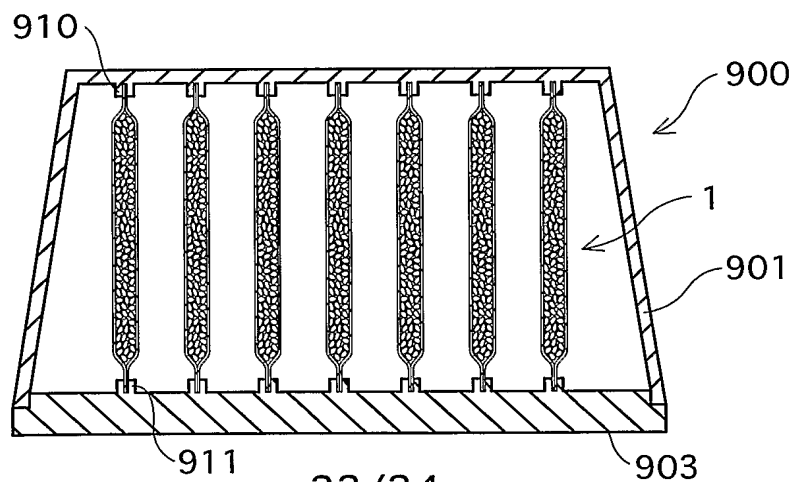


FIG.26A

STRUCTURE OF CONVENTIONAL ABSORBENT MATERIAL

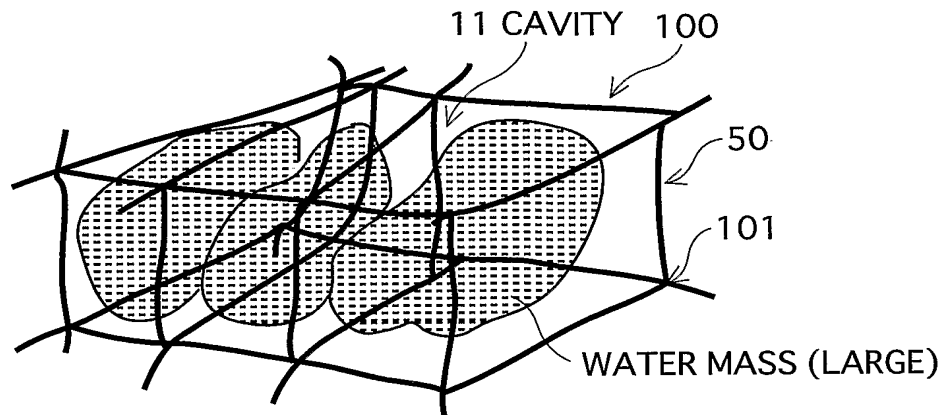


FIG.26B

DIFFICULT TO DISCHARGE WATER

